

1           1.    A method comprising:  
2                   applying stress to an optical medium to provide a  
3   desired dispersion compensation.

1           2.    The method of claim 1 including applying stress  
2   to an optical medium including a photoelastic medium to  
3   generate a corrective dispersion of the opposite polarity  
4   of a dispersion induced in the optical medium.

1           3.    The method of claim 2 including using a  
2   piezoelectric device to generate stress in an optical  
3   medium.

1           4.    The method of claim 3 including controlling the  
2   amount of stress and thereby the desired dispersion  
3   compensation by controlling the voltage applied to said  
4   piezoelectric device.

1           5.    The method of claim 4 including securing the  
2   photoelastic medium to said piezoelectric device and  
3   passing an optical signal through said photoelastic medium.

1           6.    A method comprising:  
2                    securing a photoelastic medium to a piezoelectric  
3 device; and  
4                    applying a voltage to the piezoelectric device to  
5 induce a stress in said photoelastic medium appropriate to  
6 correct dispersion generated in an optical system coupled  
7 to said photoelastic medium.

1           7.    The method of claim 6 including controlling the  
2 voltage applied to said piezoelectric device to generate a  
3 dispersion of a polarity opposite to the polarity of a  
4 dispersion generated in said optical system.

1           8.    The method of claim 7 including generating a  
2 corrective dispersion of substantially the same magnitude  
3 as the dispersion generated in said optical system.

1           9.    An optical system comprising:  
2                    an optical medium defining an optical path;  
3                    a photoelastic material in said optical path; and  
4                    a device to controllably stress said photoelastic  
5 medium to generate a dispersion of an appropriate polarity  
6 and magnitude to correct a dispersion induced in said  
7 optical medium.

1           10. The system of claim 9 wherein said device is a  
2 piezoelectric actuator.

1           11. The system of claim 10 including a voltage source  
2 to control the amount of voltage applied to said  
3 piezoelectric actuator to enable tuning of the dispersion  
4 applied through said photoelastic medium.

1           12. An optical system comprising:  
2                 an optical medium defining an optical path;  
3                 a photoelastic material in said optical path; and  
4                 a piezoelectric actuator coupled to said  
5 photoelastic material.

1           13. The system of claim 12 wherein said piezoelectric  
2 actuator is secured to said photoelastic medium.

1           14. The system of claim 13 including a voltage source  
2 to controllably apply potential to said piezoelectric  
3 actuator.

1           15. The system of claim 14 to provide a tunable  
2 magnitude and polarity of dispersion to cancel dispersion  
3 generated along said optical path by said optical medium.